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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/581,476	06/14/2000	RAYMOND O'BRIEN	P65632USO	1344

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EXAMINER

LY, ANH VU H

ART UNIT	PAPER NUMBER
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2667

DATE MAILED: 12/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/581,476

Applicant(s)

O'BRIEN ET AL.

Examiner

Anh-Vu H Ly

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Objections

1. Claim 14 is objected to because of the following informalities: no period (.) indicated at the end of the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamada, K et al (EP 0 614 324). Hereinafter, referred to as Yamada.

With respect to claims 1 and 17, Yamada discloses in Figs. 1 and 9, TDM data highway 11 and 95 for transmitting and receiving TDM data streams (a system TDM interface comprising means for receiving and transmitting TDM data streams), ATM highway 5 and 99 for receiving and transmitting data packet streams as ATM cells (a system packet communication interface comprising means for receiving and transmitting data packet streams). Further, as shown in Figs. 1 and 9, cell disassembly and cell assembly circuits for converting TDM data to ATM cells and vice versa (a format converter comprising means for performing bi-directional conversion between the interfaces). Yamada discloses in Figs. 1 and 9, cell disassembly control unit 2 and cell assembly control unit 91 (at least one service-specific adaptation module connected between the buses). Yamada discloses in Figs. 1 and 9, disassembly sequence controller 4 and assembly sequence controller 94 for controlling the circuits (a system controller).

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With respect to claims 2 and 18, Yamada discloses in Fig. 1, a link connected between the cell disassembly control unit 2 and the TDM data highway 11 (format converter comprising a TDM bus connected to the TDM interface), a link connected between the ATM highway 5 and the cell accumulating control unit 1 (a packet bus connected to the packet communication interface). Further, as shown in Figs. 1 and 9, cell assembly and cell disassembly are connected between the two links, such as a link to the TDM data highway and a link to the ATM highway (a conversion means connected between the two buses).

With respect to claim 3, Yamada discloses in Fig. 9, a cell assembly control unit 91 for converting data from the TDM data highway to ATM cells. Herein, data from the TDM data highway 95 can be voice data (conversion means comprising at least one service specific adaptation module).

With respect to claims 4, Yamada discloses in Figs. 1 and 9, disassembly sequence controller 4 and assembly sequence controller 94 for controlling the circuits (a system controller comprising means for controlling operation of circuits in the system).

With respect to claim 5, Yamada discloses in Fig. 1, the disassembly sequence controller 4 connected to the cell accumulation control unit 1 and cell disassembly control unit 2 for controlling and resolving read/write contention for the buffer memory 12 and other memories 13 through 16. Herein, the control signals travel via bi-directional links disclosed in Figs. 1 and 9 (system controller is connected to the packet bus).

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With respect to claim 6, Yamada discloses in Fig. 1, the disassembly sequence controller 4 connected to the cell accumulation control unit 1 and cell disassembly control unit 2 for controlling and resolving read/write contention for the buffer memory 12 and other memories 13 through 16. The links, shown in the left of Fig. 1, is considered as packet bus by examiner since ATM cells are received on the left side of the system (system controller comprising means for transmitting and receiving system control signal via the packet bus to the packet communication interface and format converter). Yamada discloses in Fig. 9, the assembly sequence controller 94 controls the cell assembly control unit 91 and the cell transmission control unit 92 to resolve read/write contention for the buffer memory 910 and other memories 911 through 914. Herein, The links, shown in the left of Fig. 9, is considered as a separated TDM control signal link by examiner since TDM data are received on the left side of the system (means for transmitting and receiving system control signals to the TDM interface via a separate TDM control signal link).

With respect to claim 7, Yamada discloses in Fig. 1, a ATM-TDM conversion system, therefore, control signals are ATM cells (control signals are cells such as ATM cells).

With respect to claim 8, Yamada discloses in Fig. 1, a cell disassembly circuit for converting ATM cells to TDM data, therefore, additional processing to the header is necessary for mapping purpose, since the header of the ATM cell is different from the header of the TDM packet, therefore, extra processing is implemented (system packet communication interface and the format converter comprising means for adding an additional header to each cell to direct routing of the cells within the system).

With respect to claim 9, Yamada discloses in Fig. 2, logical channel converter 9 (cell processor) for supplying control signals to the cell disassembly control unit 2 (each adaptation module comprising a cell processor connected to an adaptation circuit).

With respect to claims 10 and 16, Yamada discloses in Fig. 2, payload read controller 202 for reading the converted TDM data from the memory (each adaptation module further comprising a control processor). Further, as shown in Fig. 2, the logical channel converter 9 directs a control signal to the payload read controller 202 (cell processor comprising means for routing control signal cells to the control processor).

With respect to claim 11, Yamada discloses in Figs. 1 and 9, cell disassembly control unit 2 and cell assembly control unit 91 for assembling and disassembling ATM cells (cell processor routing means comprising a segmentation and reassembly interface connected to a separate segmentation and reassembly circuit, which is in turn connected to the control processor).

With respect to claim 12, Yamada discloses in Fig. 1, ATM cells are received by the cell disassembly and converted to TDM data for transmissions over the TDM data highway. Therefore, ATM header is extracted and processed before mapping ATM cells to TDM data (means for stripping additional headers from cells as they are routed to the segmentation and reassembly circuit).

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With respect to claim 13, Yamada discloses in Fig. 1, a plurality of buffer memories 12 and 13-16 for storing ATM cells to be transferred to the TDM data highway 11, herein, cells are stored according to the received order (means for maintaining a plurality of output queues for storing of cells to the TDM bus, the queues being maintained on a priority scheme according to VPI/VCI headers).

With respect to claims 14 and 19, Yamada discloses in Fig. 9, cell assembly circuit for converting TDM data to ATM cells therefore mapping function for addition of the additional headers are inherent by Yamada for routing purpose (a mapping function for addition of the additional headers).

With respect to claim 15, Yamada discloses in Figs. 1 and 9, cell disassembly and cell assembly circuits for converting TDM data to ATM cells and vice versa, the circuits are implemented on integrated chips (cell processor comprising a dedicated ASIC).

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hluchyj (US Patent No. 6,151,325) discloses method and apparatus for high capacity circuit switch with an ATM second stage switch.

DuRee (US Patent No. 6,067,299) discloses communications system for providing ATM connection and echo cancellation.


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4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh-Vu H Ly whose telephone number is 703-306-5675. The examiner can normally be reached on Monday-Friday 7:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 703-305-4378. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4750.

avl


CHI PHAM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600 11/22/03